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From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
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GLOWBUGS Digest 261

Topics covered in this issue include:

- 1) Re: First project?
by rdkeys@csemail.cropsci.ncsu.edu
- 2) Regens in the Grand Style
by Jeff Duntemann <jeffd@coriolis.com>

Date: Wed, 14 Aug 1996 13:03:28 -0400 (EDT)
From: rdkeys@csemail.cropsci.ncsu.edu
To: kevin.mcdonald@tivoli.com (Kevin McDonald)
Cc: rdkeys@csemail.cropsci.ncsu.edu (), bxxx@csemail.cropsci.ncsu.edu,
Subject: Re: First project?
Message-ID: <9608141703.AA100749@csemail.cropsci.ncsu.edu>

>

> Hi Bob, Kevin McDonald N50JF here.

Hello thar matey..... once again.....

> I've yearning to join the chassis punching, coil winding crowd
> and build me one-o-them new fangled regenerative receivers.
> I've got about 5 or designs from various handbooks etc. But I
> have a catch - I'd kinda particular about the types of tubes I
> use. I prefer the 6?6 types with grid caps for cosmetic reasons etc.
> I just can't get to excited about the plans I have for miniture

> tubes or those 'modern' octal jobs (i.e. GT's).

Octals are OK, but there is a fine tradition in glowbottles like the '01A and its brethren up through the '56, and the 6?6 kinds of 1930's style tube. I would use octals as a last resort, and minis only if the world were coming to an end.....

> My current inventory has:

> 6C6

> 6D6

6C6's and 6D6's make excellent regenerators.

34's are pretty good detectors, in my hands. The army used that in a mule pack radio back in 1932, and it was quite sensitive and stable.

I would opt for something like a 56 triode for the audio tube, although a 76 works fine too.

> 6F8

> 6K7

> 57

> Mostly RAS 2 and RBH spares. Are these suitable for a regen receiver project? I'd like an audio stage. Power should not be a problem
> as I have the RAS PS, a Bandmaster Sr. PS and Heathkit PS with
> 250v tap.

Sure. Make sure you couple out of the audio with a transformer to keep HV off the tin can leads.....ouch! Alternatively, choke couple with a 10 or more henry choke and then a 0.1 to 2.0 or so microfarad coupling cap rated at 600-1000v minimum to the tin cans.

>

> If you've seen a design using these fine looking bottles could you
> forward a reference so I can continue my quest?

Any of the Editors and Engineers Radio Handbooks (the old Jones handbooks of the 30's and 40's) should have a workable design. About the 10th edition or so they came out with an excellent design based upon the 6J7 and the 6C5, but you could easily backsub the 6C6/76 types. You could put a '41 in the output maybe. Then it would be like a mini-RAL receiver.

The ARRL handbook designs were not quite as good in that era and were beginning to get cheap and use things like 6SN7's by 1950 or so. They looked just like the SW-3 for some reason.....

Actually, if I were to pick a premier regenerator design, I would follow the pattern set by the Naval Radio Research Labs at the Washington Navy Yard back in 1916, which had a development that culminated in the classic IP-501A and BC-131 style regenerators. (See from Duncan and Drew ``Radio Telegraph and Telephony'' 2nd ed., 1931, New York, John Wiley and Sons, in the chapter XV on Commercial Long and Short Wave Receivers, pages 457-484.) The design used a triode detector followed by two stages of transformer coupled audio using triodes (all '01A's). In the ``modern 30's sytle'', I would opt for 56's or 76's as the tube of choice. In the ``post WWII era style'' I would opt for 6J5 tubes as the detctor and audio stages. Run about 45-90 volts on the stages with no more than 45 on the detector, and it is a sweet dream design. Smooth as silk in regeneration and with good coils it will slice the sideband off a sideband signal (at least my cheapskates approximation on a plastic breadboard and plastic panel using 27's or 76's does....(:+}}.....).

Not until the RAL came along in the late 30's was anything really better.

Since that time, nothing is still any better than the RAL.....
The commercial regens of shipboard use by RMCA and Mackay, in the 50's through the 60's were pretty good, but did not compare to the old RAL.

> Thanx and 73's
> kevin.mcdonald@tivoli.com

Yer most welcome, thar matey....

73/ZUT DE NA4G/Bob UP

Date: Wed, 14 Aug 1996 11:50:13 PDT
From: Jeff Duntemann <jeffd@coriolis.com>
To: glowbugs@theporch.com
Subject: Regens in the Grand Style
Message-ID: <1.5.4.16.19960814114812.10af11aa@ntserver.coriolis.com>

> Hi Bob, Kevin McDonald N50JF here.
> I've yearning to join the chassis punching, coil winding crowd
> and build me one-o-them new fangled regenerative receivers.
> I've got about 5 or designs from various handbooks etc.

Lindsay Books sells a number of reprints of 30's and 40's books on radio, stuffed to the rafters with circuits of this sort. If you don't have their catalog you should get it. RADIO FOR THE MILLIONS is the one I like the most.

> But I
> have a catch - I'd kinda particular about the types of tubes I
> use. I prefer the 6?6 types with grid caps for cosmetic reasons etc.
> I just can't get to excited about the plans I have for miniture
> tubes or those 'modern' octal jobs (i.e. GT's).

I like the "G" bottles too, though I remember reading somewhere that putting the grid up in the air and away from the shielding effect of a metal chassis made such tubes more susceptible to hum, especially where the unit had an integral AC supply. I recall seeing a project in one of the old Handbooks where there was a little sheet metal trough placed over the grid leak resistor where it stretched from the main tuning cap to the grid cap, just to keep the human down to reasonable levels.

Anybody else have any thoughts on this? I've built no radios with grid-cap tubes and have no direct experience of my own.

--73--

--Jeff Duntemann KG7JF
Scottsdale, Arizona

End of GLOWBUGS Digest 261
